

FIGURE 1
(Prior Art)

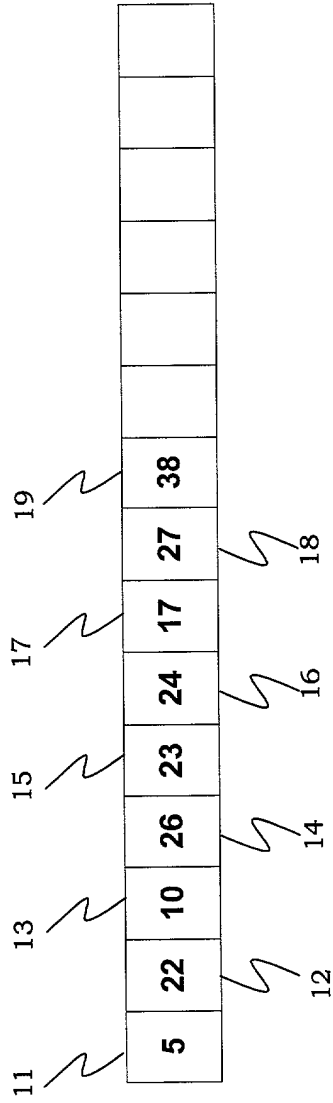
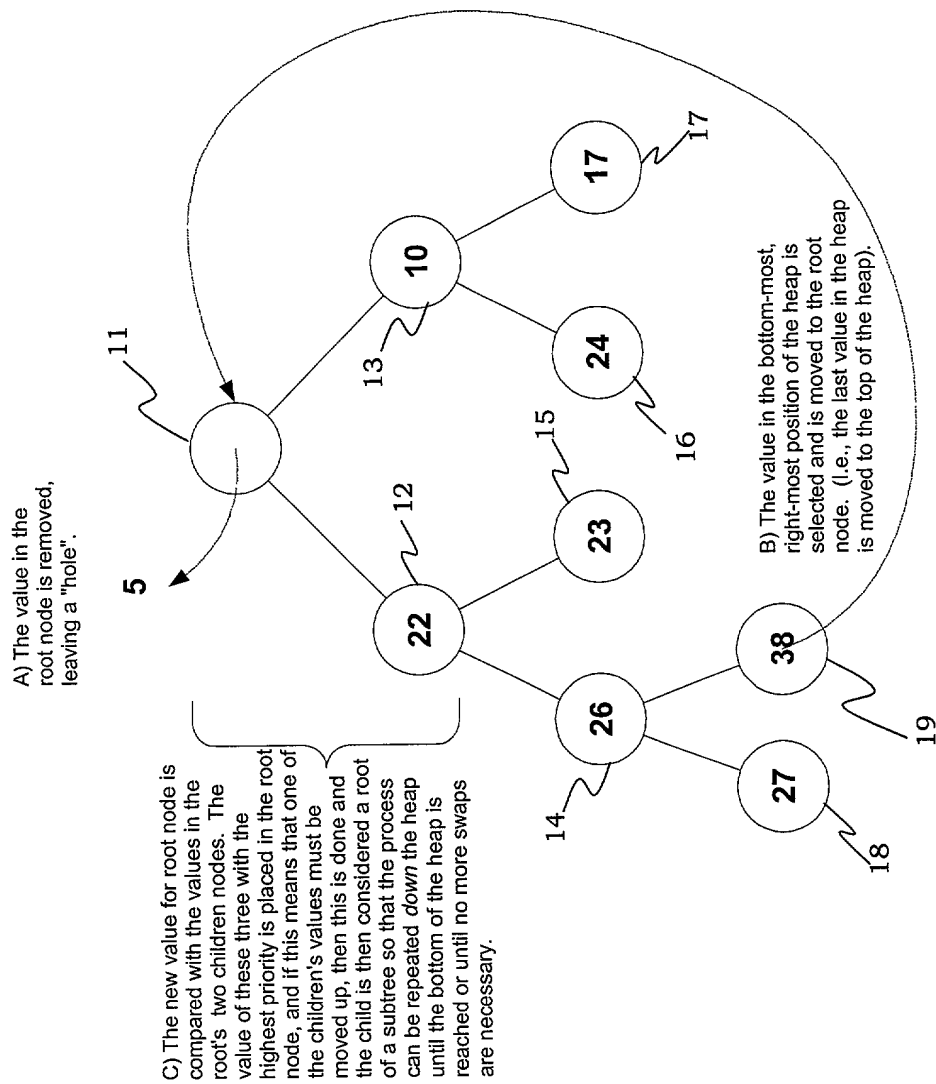


FIGURE 2
(Prior Art)



C) The new value for root node is compared with the values in the root's two children nodes. The value of these three with the highest priority is placed in the root node, and if this means that one of the children's values must be moved up, then this is done and the child is then considered a root of a subtree so that the process can be repeated *down* the heap until the bottom of the heap is reached or until no more swaps are necessary.

B) The value in the bottom-most, right-most position of the heap is selected and is moved to the root node. (I.e., the last value in the heap is moved to the top of the heap).

FIGURE 3
(Prior Art)

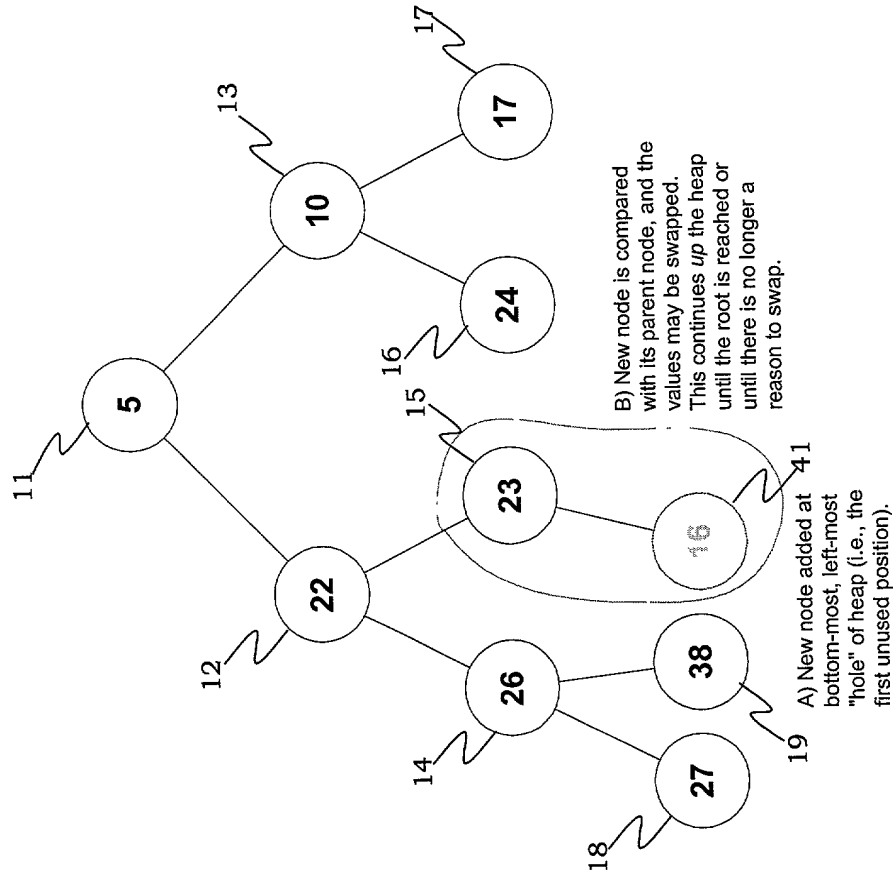
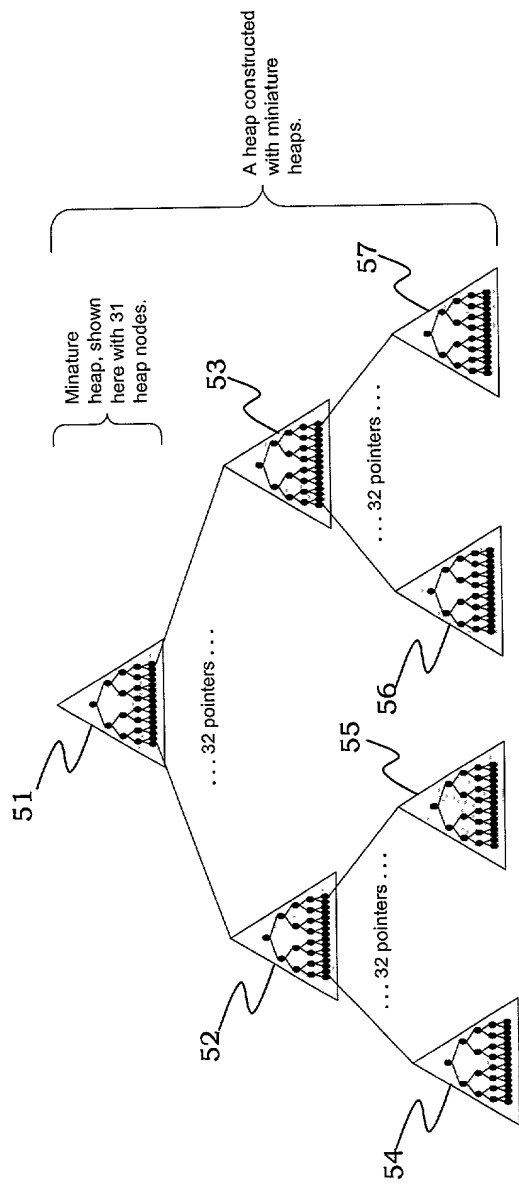
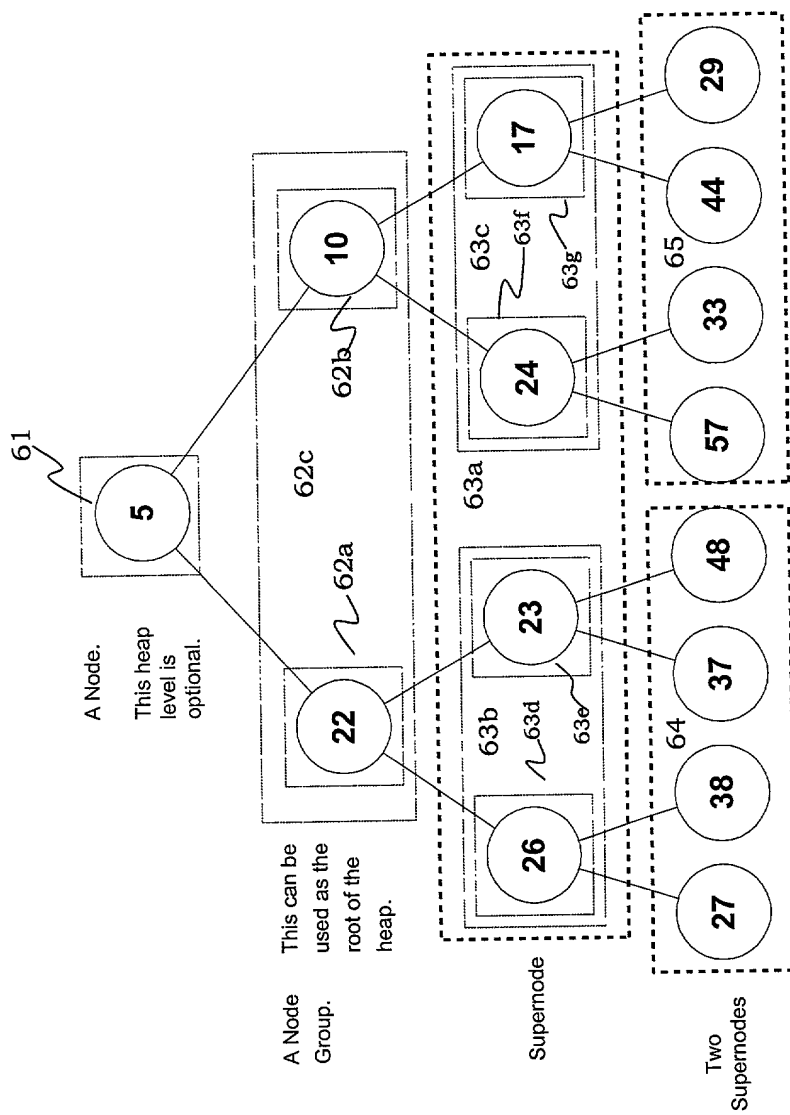


FIGURE 4
(Prior Art)





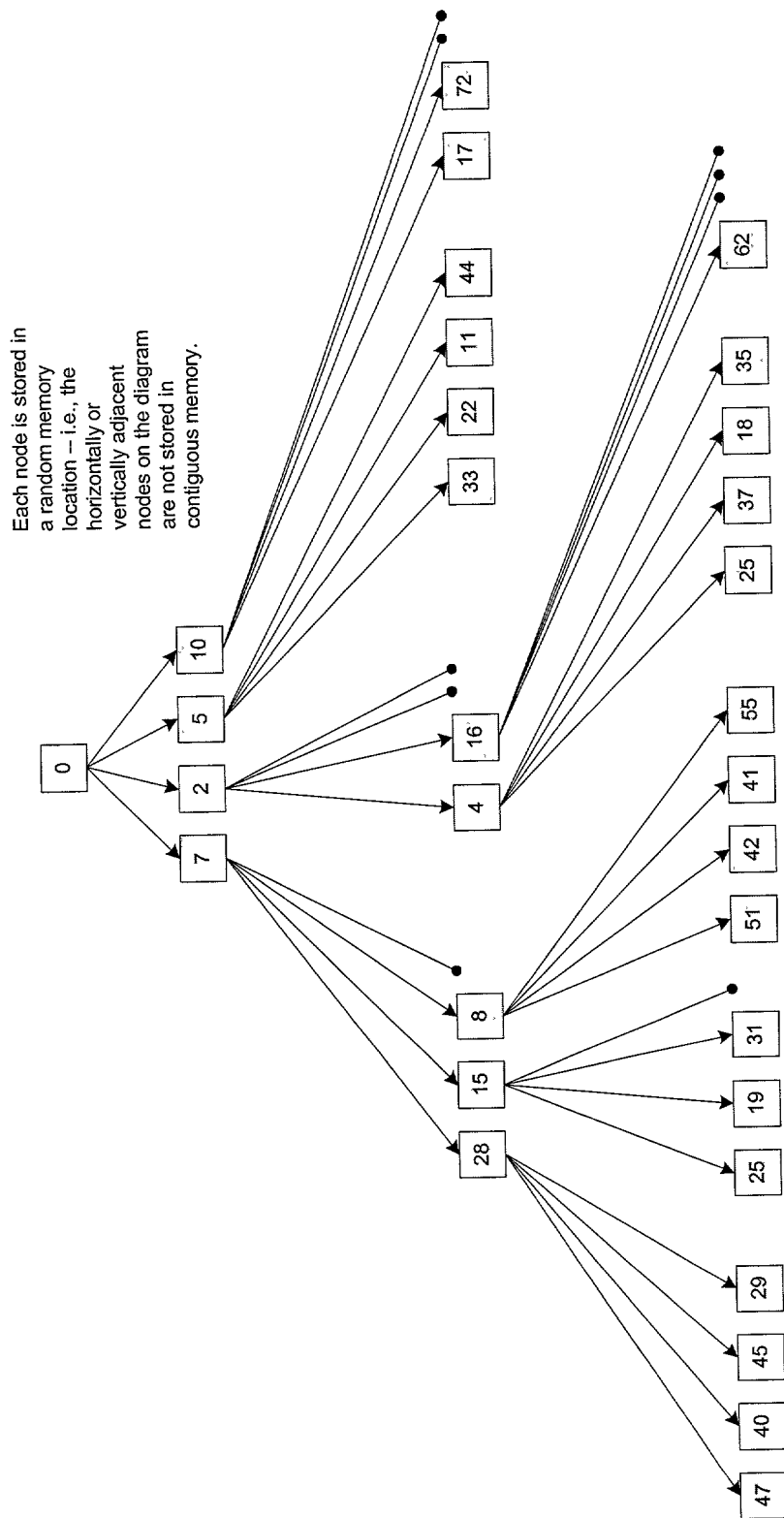


FIGURE 7

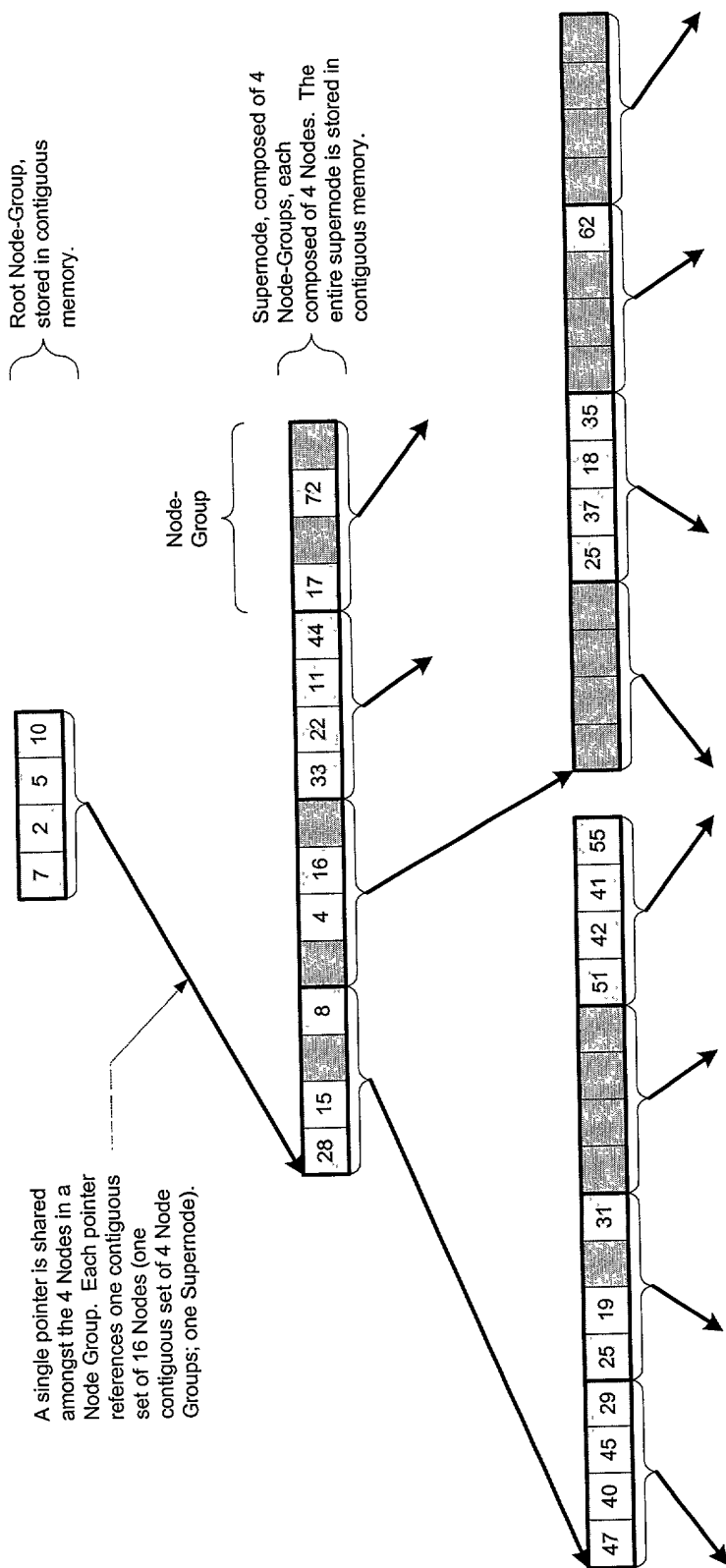


FIGURE 8

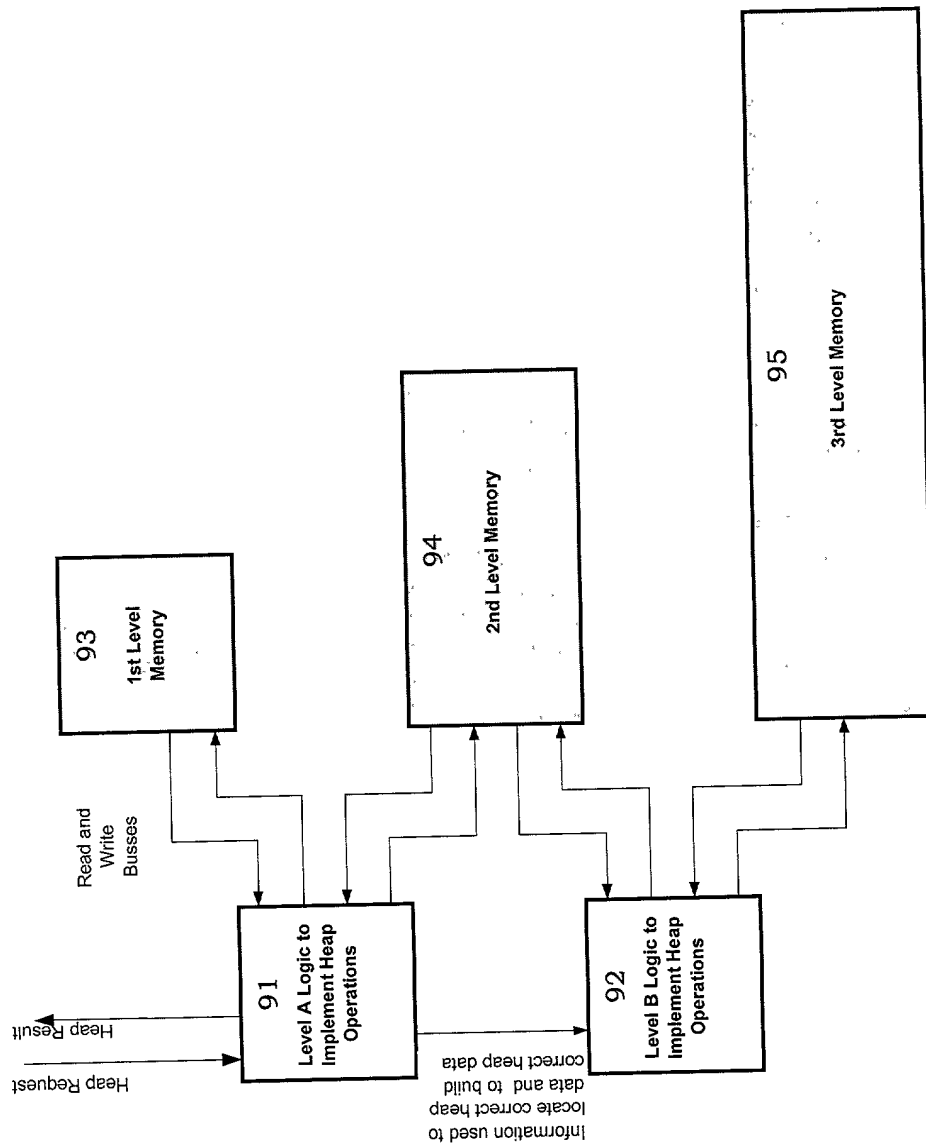
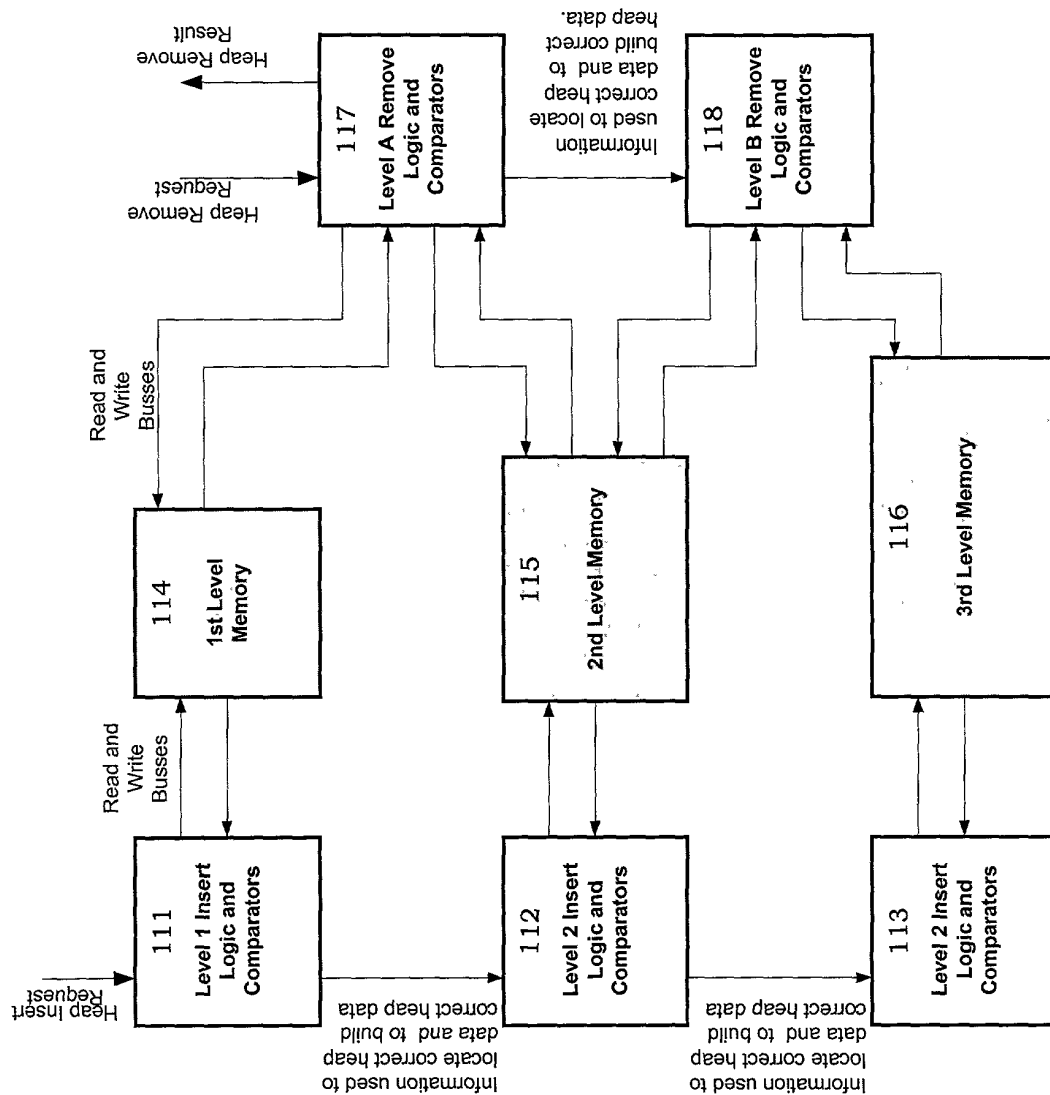
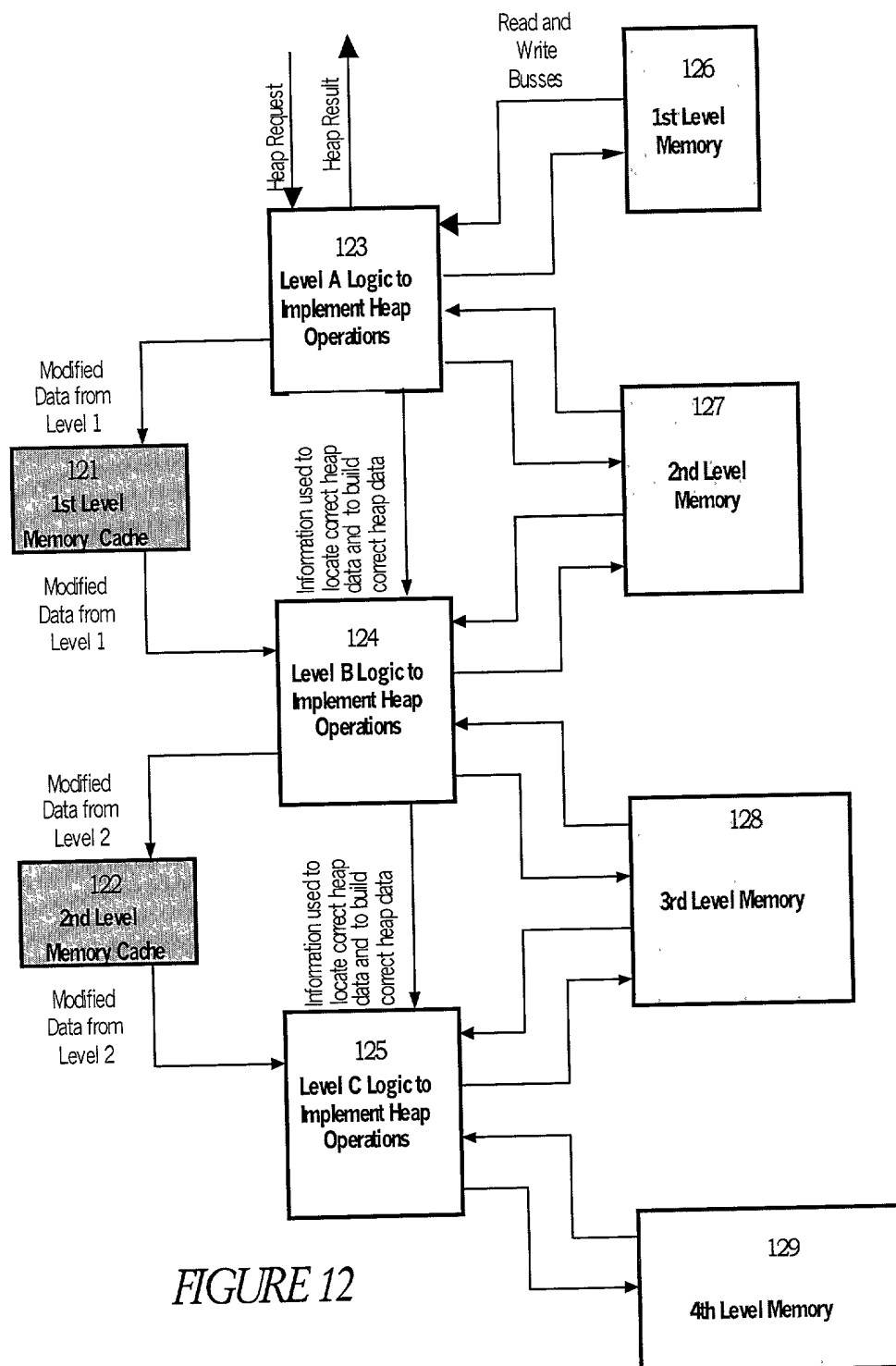


FIGURE 9

	time ----->																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Read Level 1 RAM	A						B											
Write Level 1 RAM						A						B						
Level A Comparisons				A	A					B	B							
Read Level 2 RAM			A						B									
Write Level 2 RAM								A						B				
Level B Comparisons						A	A					B	B					
Read Level 3 RAM					A						B							
Write Level 3 RAM										A							B	
Level C Comparisons								A	A					B	B			
Read Level 4 RAM							A						B					
Write Level 4 RAM										A						B		

FIG. 10





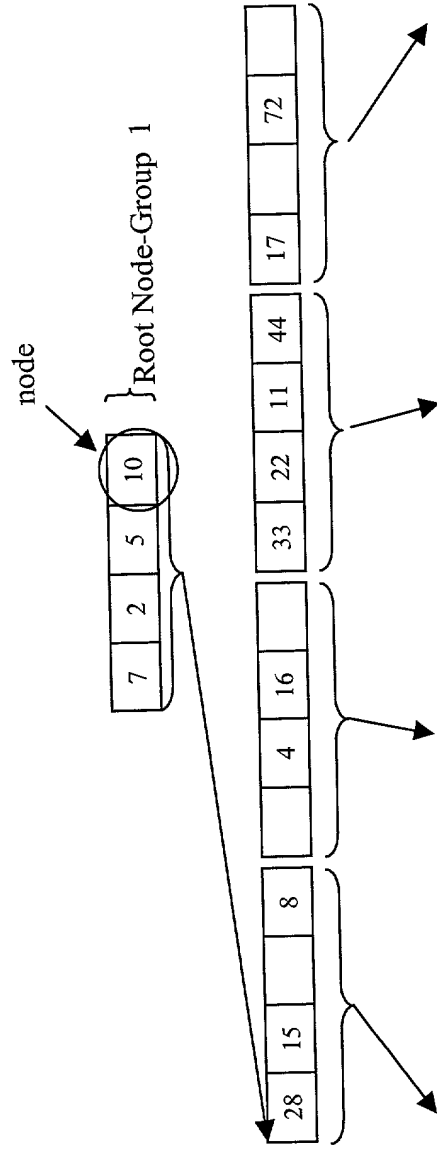
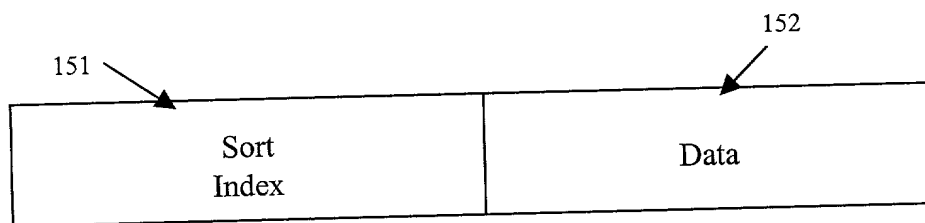
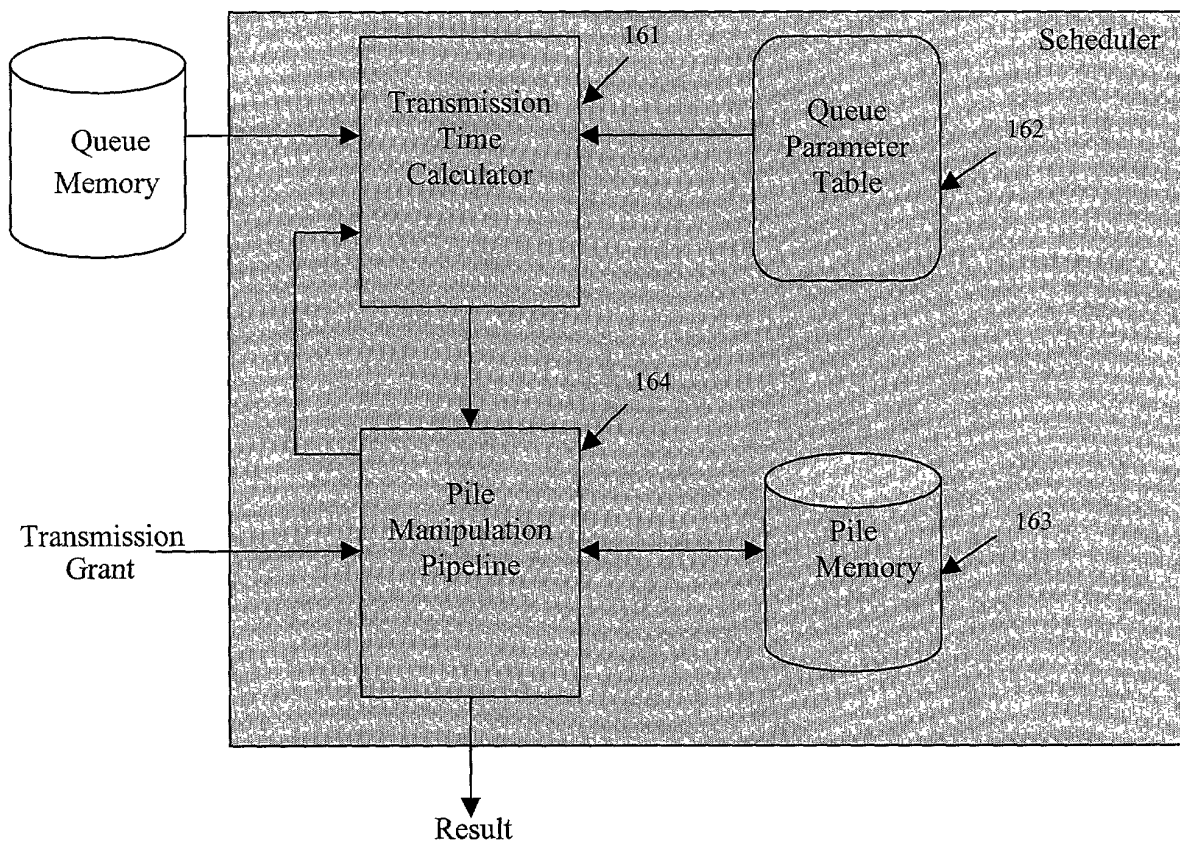


FIG. 14



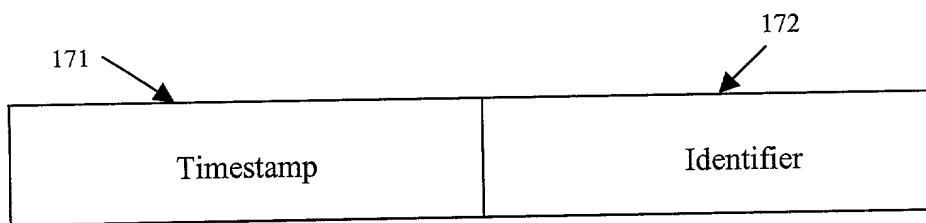
150

FIG. 15



160

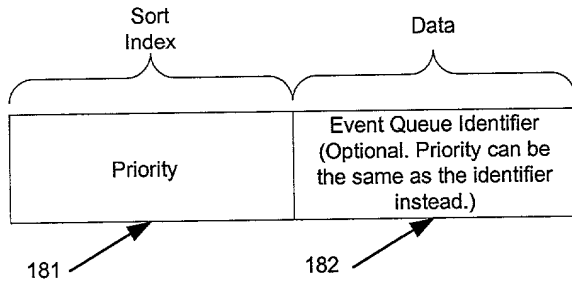
FIG. 16



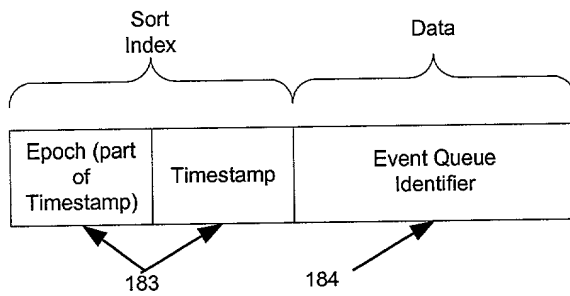
170

FIG. 17

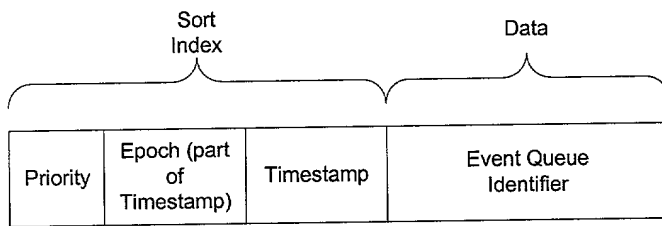
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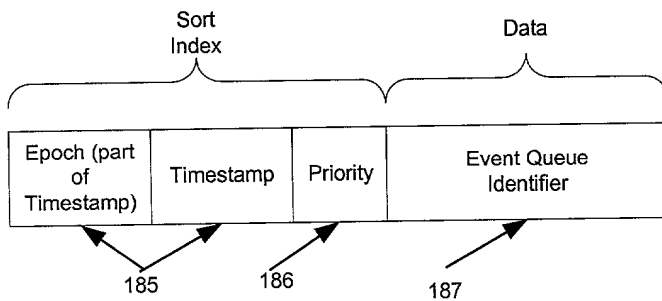
Pile Node Entry
for Strict Priority
FIG. 18A



Pile Node Entry for
Weighted Fair Queuing
FIG. 18B



Pile Node Entry for
Queuing with Weighted
Fair Priorities
FIG. 18C



Pile Node Entry for
Traffic Shapping
FIG. 18D

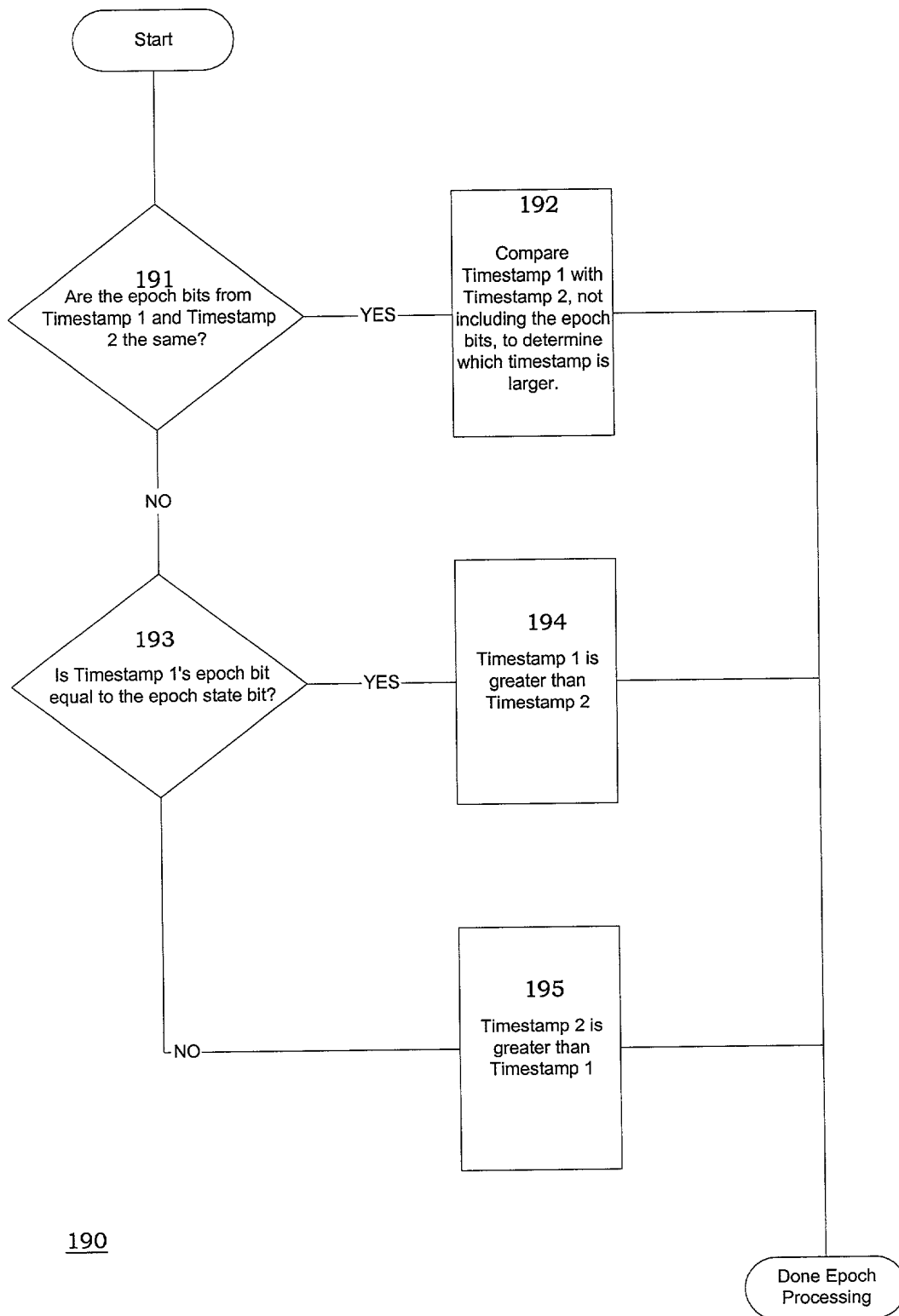


FIG. 19

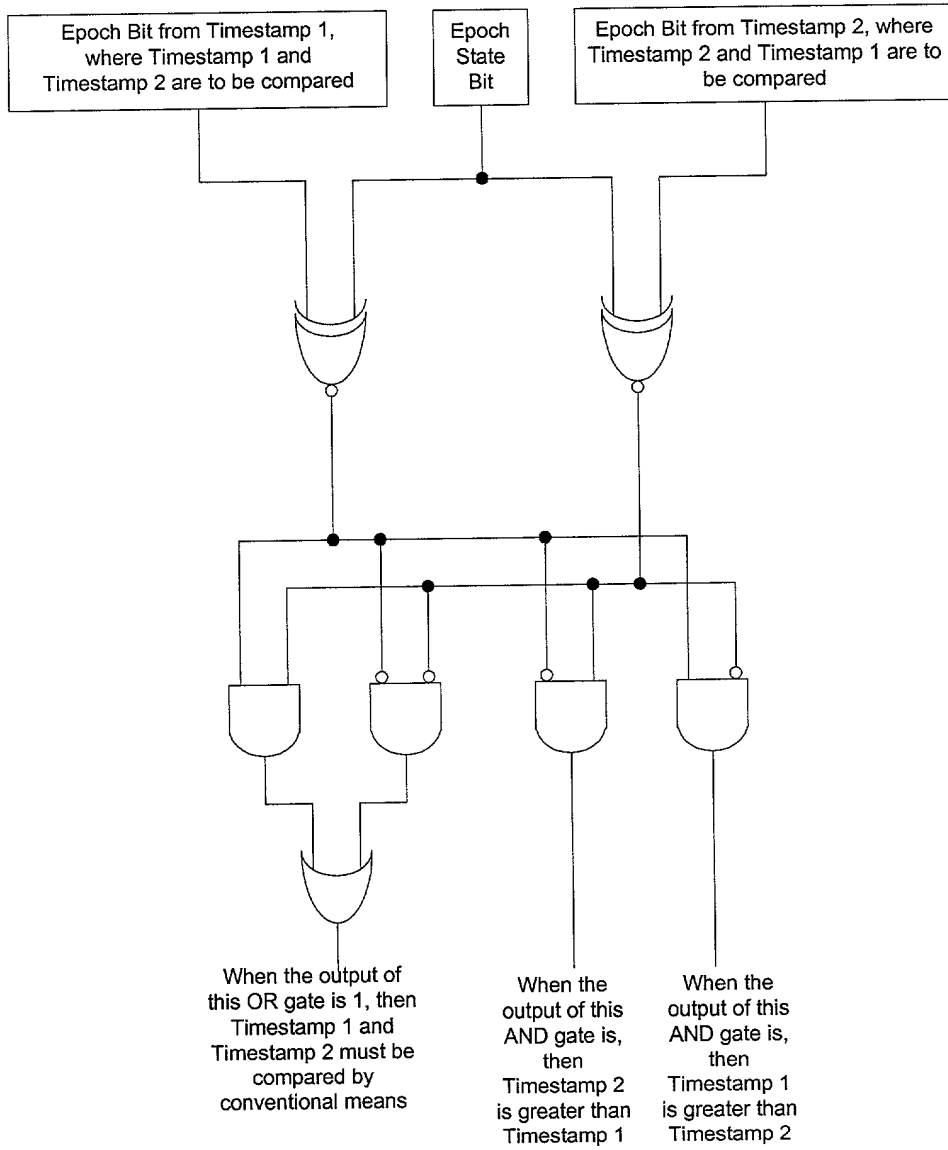


FIG. 20

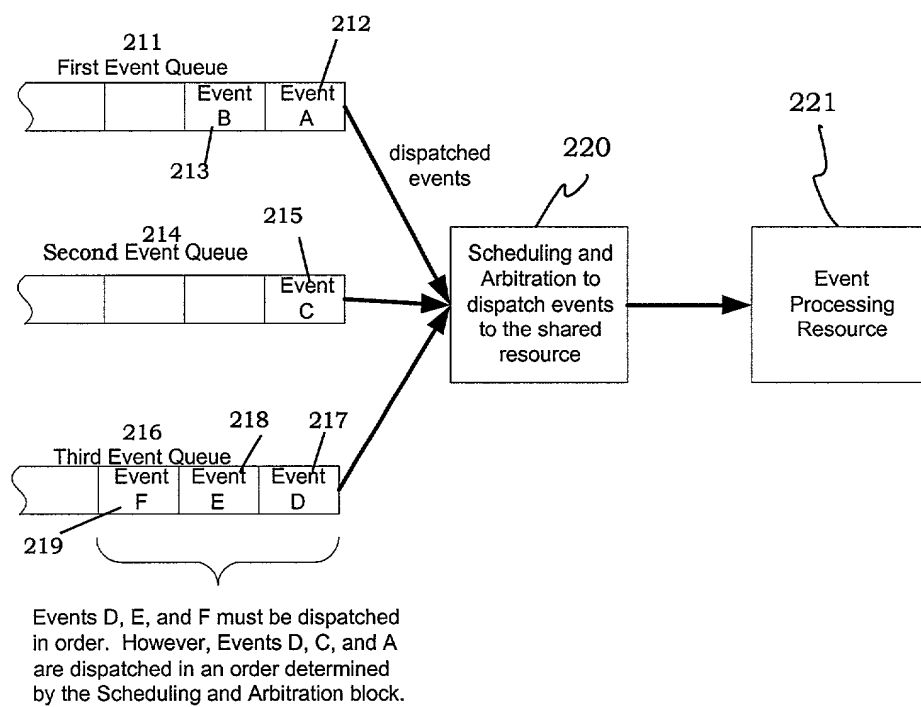


FIGURE. 21